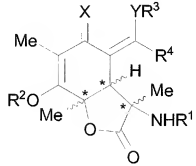
In the Claims

This listing of claims will replace all prior versions and listings of claims in this application.

1-23 (Cancelled).

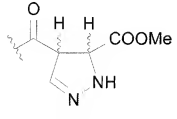
24 (Currently amended). A compound of the general formula (**2**):



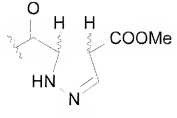
(**2**)

wherein

R^1 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), (C_3-C_{10})-alkenyl, and acyl groups, wherein free –COOH-groups can be present on the acyl group in the form of esters; or, optionally, R^1 can be (**3**) or (**4**)



(**3**)



(**4**) ;

R^2 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and acyl groups;

R^3 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and acyl groups;

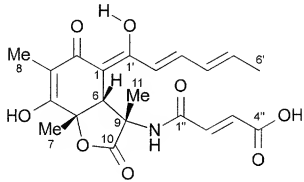
R^4 is selected from the group consisting of: (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and (C_3-C_{10})-alkenyl, wherein the alkenyl residue can contain one or more double bonds;

X is selected from the group consisting of O, S, NOH and NOR^5, wherein R^5 is a straight chain or branched chain (C_1-C_6)-alkyl;

Y is O, or Y and X are N-atoms bound to each other thus forming a pyrazole ring;

wherein the compound can be present as an (*R*,*R*,*R*)-, (*R*,*R*,*S*)-, (*R*,*S*,*R*)-, (*R*,*S*,*S*)-, (*S*,*R*,*R*)-, (*S*,*R*,*S*)-, (*S*,*S*,*R*)- or (*S*,*S*,*S*)-stereoisomer; and pharmaceutically acceptable salts ~~or solvates~~ of (2).

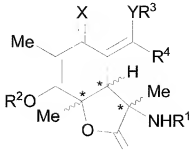
25 (Currently amended). The compound according to claim 24 having the formula (1):



(**1**)

(sorbicillacton A), their diastereomers, as well as the corresponding enantiomers, and pharmaceutically acceptable salts ~~or solvates~~ of this compound.

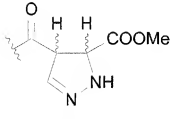
26 (Currently amended). A method for the production of a compound of the general formula (**2**):



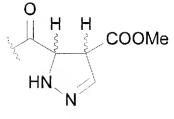
(**2**)

wherein

R^1 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), (C_3-C_{10})-alkenyl, and acyl groups, wherein free –COOH-groups can be present on the acyl group in the form of esters; or, optionally, R^1 can be (**3**) or (**4**)



(**3**)



(**4**) ;

R^2 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and acyl groups;

R^3 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and acyl groups;

R^4 is selected from the group consisting of: (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and (C_3-C_{10})-alkenyl, wherein the alkenyl residue can contain one or more double bonds;

X is selected from the group consisting of O, S, NOH and NOR^5, wherein R^5 is a straight chain or branched chain (C_1-C_6)-alkyl;

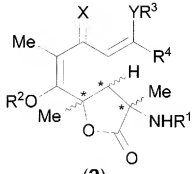
Y is O, or Y and X are N-atoms bound to each other thus forming a pyrazole ring;

wherein the compound can be present as an (*R*,*R*,*R*)-, (*R*,*R*,*S*)-, (*R*,*S*,*R*)-, (*R*,*S*,*S*)-, (*S*,*R*,*R*)-, (*S*,*R*,*S*)-, (*S*,*S*,*R*)- or (*S*,*S*,*S*)-stereoisomer; and pharmaceutically acceptable salts ~~or solvates~~ of (2);

wherein said method comprises growing a fungus of the genus *Penicillium* in a marine organism and isolating said compound from the culture medium and/or the fungal biomass.

27 – 28 (Cancelled).

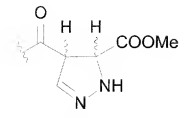
29 (Currently amended). A method for the biomimetic synthesis of a compound of the general formula (**2**):



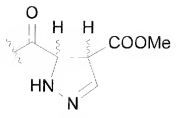
(**2**)

wherein

R^1 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), (C_3-C_{10})-alkenyl, and acyl groups, wherein free –COOH-groups can be present on the acyl group in the form of esters; or, optionally, R^1 can be (**3**) or (**4**)



(3)



(4) ;

R^2 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and acyl groups;

R^3 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and acyl groups;

R^4 is selected from the group consisting of: (C_1-C_{10})-alkyl (whcrein alkyl is straight or branched), and (C_3-C_{10})-alkenyl, wherein the alkenyl residue can contain one or more double bonds;

X is selected from the group consisting of O, S, NOH and NOR^5, wherein R^5 is a straight chain or branched chain (C_1-C_6)-alkyl;

Y is O, or Y and X are N-atoms bound to each other thus forming a pyrazole ring;

wherein the compound can be present as an (*R*,*R*,*R*)-, (*R*,*R*,*S*)-, (*R*,*S*,*R*)-, (*R*,*S*,*S*)-, (*S*,*R*,*R*)-, (*S*,*R*,*S*)-, (*S*,*S*,*R*)- or (*S*,*S*,*S*)-stereoisomer; and pharmaceutically acceptable salts ~~or solvates~~ of (2);

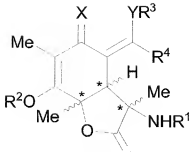
wherein said method comprises:

a) providing sorbicillin;

b) oxidative dearomatisation and subsequent addition of alanin or other amino acids; and

c) subsequent attachment of fumaric acid or an analogous acyl residue.

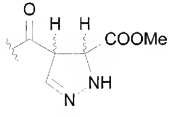
30 (Currently amended). A pharmaceutical composition comprising a compound of the general formula (**2**):



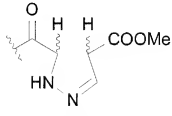
(**2**)

wherein

R^1 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), (C_3-C_{10})-alkenyl, and acyl groups, wherein free –COOH-groups can be present on the acyl group in the form of esters; or, optionally, R^1 can be (**3**) or (**4**)



(**3**)



(**4**) ;

R^2 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and acyl groups;

R^3 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and acyl groups;

R^4 is selected from the group consisting of: (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and (C_3-C_{10})-alkenyl, wherein the alkenyl residue can contain one or more double bonds;

X is selected from the group consisting of O, S, NOH and NOR^5, wherein R^5 is a straight chain or branched chain (C_1-C_6)-alkyl;

Y is O, or Y and X are N-atoms bound to each other thus forming a pyrazole ring;

wherein the compound can be present as an (*R*,*R*,*R*)-, (*R*,*R*,*S*)-, (*R*,*S*,*R*)-, (*R*,*S*,*S*)-, (*S*,*R*,*R*)-, (*S*,*R*,*S*)-, (*S*,*S*,*R*)- or (*S*,*S*,*S*)-stereoisomer; and pharmaceutically acceptable salts ~~or solvates~~ of (2); together with one or more suitable excipients and additives.

31 (Previously presented). The pharmaceutical composition according to claim 30, characterised in that the compound is present in the form of a depot substance or as a precursor, together with a suitable, pharmaceutically acceptable diluent or carrier substance.

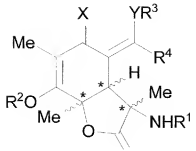
32 (Previously presented). The pharmaceutical composition according to claim 30, characterised in that the compound is present in an amount of 20 µg.

33 (Previously presented). The pharmaceutical composition according to claim 30, characterised in that the compound is present in an amount such that a concentration range of between 0.3 and 3.0 µg/ml is present at a treatment *in vivo*.

34 (Previously presented). The pharmaceutical composition according to claim 30, characterised in that it contains further chemotherapeuticals.

35 (Previously presented). The pharmaceutical composition according to claim 30, in the form of tablets, dragées, capsules, droplets, suppositories, preparations for injection or infusion for peroral, rectal or parenteral use.

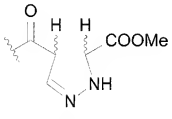
36 (Currently amended). A method for inhibiting replication of a retrovirus, wherein said method comprises contacting the retrovirus with a compound of the general formula (**2**):



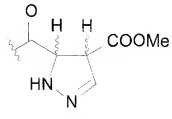
(2)

wherein

R^1 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), (C_3-C_{10})-alkenyl, and acyl groups, wherein free –COOH-groups can be present on the acyl group in the form of esters; or, optionally, R^1 can be (**3**) or (**4**)



(**3**)



(**4**) ;

R^2 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and acyl groups;

R^3 is selected from the group consisting of: –H, (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and acyl groups;

R^4 is selected from the group consisting of: (C_1-C_{10})-alkyl (wherein alkyl is straight or branched), and (C_3-C_{10})-alkenyl, wherein the alkenyl residue can contain one or more double bonds;

X is selected from the group consisting of O, S, NOH and NOR^5, wherein R^5 is a straight chain or branched chain (C_1-C_6)-alkyl;

Y is O, or Y and X are N-atoms bound to each other thus forming a pyrazole ring;

wherein the compound can be present as an (*R*,*R*,*R*)-, (*R*,*R*,*S*)-, (*R*,*S*,*R*)-, (*R*,*S*,*S*)-, (*S*,*R*,*R*)-, (*S*,*R*,*S*)-, (*S*,*S*,*R*)- or (*S*,*S*,*S*)-stercoisomer; and pharmaceutically acceptable salts ~~or solvates~~ of (2); and wherein the retrovirus is HIV-1.

37 (Cancelled).

38 (Currently amended). The method according to claim 36, wherein ~~the retrovirus is HIV-1, and~~ the compound is administered in a concentration range of between 0.3 and 3.0 μg/ml.

39 – 40 (Cancelled).